



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0795; Directorate Identifier 2008-SW-53-AD]

RIN 2120-AA64

Airworthiness Directives; Eurocopter France Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Eurocopter France (Eurocopter) Model AS332C, L, and L1 helicopters to require a one-time inspection of the main rotor head (MRH) swash-plate upper bearing (bearing) for a non-smooth point (friction point). This proposed AD is prompted by a report of the premature deterioration of the MRH bearing of the rotating star installed on a Model AS332L1 helicopter. The proposed actions are intended to detect deterioration of the MRH bearing and to prevent overloading the scissor links which drive the main rotor system, failure of the scissors links, and subsequent loss of control of the helicopter.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- **Fax:** 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

EXAMINING THE AD DOCKET: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005; telephone (800) 232-0323; or at <http://www.eurocopter.com>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

FOR FURTHER INFORMATION CONTACT: Gary Roach, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email gary.b.roach@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD No. 2008-0172-E, dated September 9, 2008 (EAD No. 2008-0172-E), for the Eurocopter Model AS 332 C, C1, L, and L1 helicopters, with an MRH, part number (P/N) 332A31-0001-05 or P/N 332A31-0001-06, having a serial number (S/N) of M172, M216, M261, M308, M547, M677, M811, or M936, and having “logged less than 275 flight hours since the

last overhaul or repair.” EASA states that Eurocopter received a report of deterioration of an MRH bearing on an MRH that was installed on an AS 332 L1 helicopter. The AS 332 L1 helicopter had logged 72 flight hours since the last overhaul. The EASA states that there was an onset of vibrations in flight and these vibrations were due to premature deterioration of the upper bearing of the MRH swash-plate. They state that this condition, if not corrected, “could lead to failure of the scissors links and consequently to the control loss of the helicopter.”

FAA’s Determination

These helicopters have been approved by the aviation authority of the France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are proposing this AD because we evaluated all information provided by EASA and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

Related Service Information

Eurocopter has issued one Emergency Alert Service Bulletin (EASB) with two different numbers, both Revision 0, and both dated September 8, 2008: EASB No. 62.00.73 for Model AS332C, L, and L1 helicopters and non-FAA type certificated Model C1 helicopters; and EASB No. 62.00.30 for non-FAA type certificated Model 532 UC, AC, UL, AL, SC, and UE military helicopters. EASB No. 62.00.73 specifies checking for the absence of a friction point in the MRH bearing. If there is no friction point, EASB No. 62.00.73 specifies checking the condition of the grease in the swash-plate assembly by lubricating the swash-plate, rotating it by hand, and determining if the expelled grease

contains traces of metal particles. If the expelled grease does not contain traces of metal particles, EASB No. 62.00.73 specifies checking the swash-plate “rotation torque” using a spring scale. If the rotation torque is less than 5.5 kg, EASB No. 62.00.73 specifies checking the bearing for vertical play. If there is a friction point, the expelled grease contains traces of metal particles, the rotation torque is equal to or greater than 5.5 kg, or there is vertical play in the bearing, EASB No. 62.00.73 specifies removing the MRH and sending it to an approved repair station. EASA classified this EASB as mandatory and issued EAD No. 2008-0172-E to ensure the continued airworthiness of these helicopters.

Proposed AD Requirements

This proposed AD would require, within 5 hours time-in-service (TIS), for the specified model helicopters having less than 275 hours TIS since the last MRH overhaul, the following:

- Inspect the MRH bearing for a non-smooth point (friction point) by rotating the MRH swash-plate and:
 - If there is a friction point in the bearing, before further flight, replace the MRH with an airworthy MRH.
 - If there is not a friction point in the bearing, lubricate the MRH swash-plate and rotate it until grease is expelled; inspect the expelled grease for metal particles.
 - If there is a metal particle in the grease, before further flight, replace the MRH with an airworthy MRH.
 - If there is not a metal particle in the grease, measure the force required to rotate the MRH swash-plate using a spring scale attached to the pitch change rod attachment yokes.

- If the force to rotate the MRH swash-plate is equal to or greater than 5.5 kg, before further flight, replace the MRH with an airworthy MRH.
- If the force to rotate the MRH swash-plate is less than 5.5 kg, inspect the MRH swash-plate assembly for vertical play in the bearing. If there is vertical play in the bearing, before further flight, replace the MRH with an airworthy MRH.
- Before installing an MRH, P/N 332A31-0001-05 or P/N 332A31-001-06, with S/N M172, M216, M261, M308, M547, M561, M677, M811, M859, M935, M936, M938, or M942 on any helicopter, inspect the MRH in accordance with the requirements of this AD.

Differences between this Proposed AD and the EASA AD

The EASA Emergency AD includes Model AS332C1 helicopters. This proposed AD does not include this model helicopter since it is not type certificated in the U.S. The EASA AD does not include S/Ns M561, M859, M935, M938, and M942, whereas this proposed AD does include those S/Ns. The EASA Emergency AD requires operators to comply with the requirements no later than the “next last flight of the day.” Our proposed AD would require the actions to be accomplished within 5 hours TIS. Also, the EASA Emergency AD is applicable to the specified helicopters having logged less than 275 flight hours since the last overhaul or repair, whereas our proposed AD would only be applicable to the specified helicopters having less than 275 hours TIS since the last overhaul of the MRH.

Costs of Compliance

We estimate that this proposed AD would affect 6 helicopters of U.S. registry. We estimate that operators may incur the following costs in order to comply with this AD. It

would take approximately 1 work-hour per helicopter to accomplish the inspection of the MRH bearing for a friction point, inspection of the swash-plate grease for any metal particles, measurement of the swash-plate force to rotate, and inspection of the bearing for vertical play. It would take approximately 60 work-hours to replace the MRH. These proposed actions would be accomplished at an average labor rate of \$85 per work-hour. We estimate the parts cost of replacing an MRH would be approximately \$20,000. Based on these figures, we estimate the total cost of the proposed AD on U.S. operators to be \$25,610, assuming that all affected helicopters are inspected and that one MRH in the fleet would need to be replaced.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications

under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by Reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

EUROCOPTER FRANCE (EUROCOPTER): Docket No. FAA-2012-0795;
Directorate Identifier 2008-SW-53-AD.

(a) Applicability.

This AD applies to Eurocopter Model AS332C, L, and L1 helicopters with a main rotor head (MRH), part number (P/N) 332A31-0001-05 or P/N 332A31-0001-06, with a serial number (S/N) M172, M216, M261, M308, M547, M561, M677, M811, M859, M935, M936, M938, or M942 installed; having less than 275 hours time-in-service (TIS) since the last overhaul of the MRH; certificated in any category.

(b) Unsafe Condition.

This AD defines the unsafe condition as deterioration of the MRH swash-plate upper bearing (bearing), which could result in overloading the scissor links which drive the main rotor system, failure of the scissors links, and subsequent loss of control of the helicopter.

(c) Compliance.

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(d) Required Actions.

Within 5 hours TIS:

(1) Inspect the MRH bearing for a non-smooth point (friction point) by rotating the MRH swash-plate and:

(i) If there is a friction point in the bearing, before further flight, replace the MRH with an airworthy MRH.

(ii) If there is not a friction point in the bearing, lubricate the MRH swash-plate and rotate it until grease is expelled; inspect the expelled grease for metal particles.

(A) If there is a metal particle in the grease, before further flight, replace the MRH with an airworthy MRH.

(B) If there is not a metal particle in the grease, measure the force required to rotate the MRH swash-plate using a spring scale attached to the pitch change rod attachment yokes.

(1) If the force to rotate the MRH swash-plate is equal to or greater than 5.5 kg, before further flight, replace the MRH with an airworthy MRH.

(2) If the force to rotate the MRH swash-plate is less than 5.5 kg, inspect the MRH swash-plate assembly for vertical play in the bearing. If there is vertical play in the bearing, before further flight, replace the MRH with an airworthy MRH.

(2) Before installing an MRH, P/N 332A31-0001-05 or P/N 332A31-001-06, with S/N M172, M216, M261, M308, M547, M561, M677, M811, M859, M935, M936, M938, or M942 on any helicopter, inspect the MRH in accordance with paragraph (d)(1) of this AD.

(e) Alternative Methods of Compliance (AMOC).

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Gary Roach, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email gary.b.roach@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(f) Additional Information.

(1) Eurocopter Emergency Alert Service Bulletin, No. 62.00.73, Revision 0, dated September 8, 2008, which is not incorporated by reference, contains additional information about the subject of this AD. For this service information, contact American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005; telephone (800) 232-0323; or at <http://www.eurocopter.com>. You may review this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(2) The subject of this AD is addressed in the European Aviation Safety Agency (France) Emergency AD No. 2008-0172-E, dated September 9, 2008.

(g) Subject.

Joint Aircraft Service Component (JASC) Code: 6400,Tail Rotor System.

Issued in Fort Worth, Texas, on July 20, 2012.

Kim Smith,

Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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